

## Leidy, Robert

---

**From:** Julia Fonseca <Julia.Fonseca@pima.gov>  
**Sent:** Monday, November 23, 2015 8:10 AM  
**To:** Leidy, Robert  
**Cc:** evan.canfield@pima.gov  
**Subject:** FW: Comments on Erosion Modeling  
**Attachments:** August 14, 2013 - Pima County Comments - Rosemont Copper Mine Preliminary Administrative Final Environmental Impact Statement.pdf

Hi, I think the Golder Study has what you might have been looking for, Rob, in terms of quantifying the differences that various assumptions make. See these comments by Evan, which he sent you previously.

Location	Page	Line	Comment/Change requested
Accuracy	5	11-17	The FEIS stated that the relative difference in percent change of peak flow was 13% for the Golder model, compared with 17% for the Rosemont model. The FEIS concluded that the Rosemont model was reasonable based on this comparison. Although the Golder's study has some technical issues, the study result actually showed why we concerned the Rosemont modeling result. Table 3 of the Golder study (2012) showed that the percent change for Run 1 (high rainfall with high CN) could be 28% while it was 13% for Run 3 (low rainfall with low CN). Our previous comments for the Rosemont model are 1. the model should use higher rainfall, and 2. the model should use higher CN. The Golder's result clearly showed that the percent change (between pre- and post-mining) could be much less (13% versus 28%) if the model does not use appropriate rainfall and CN. We believe that the Rosemont model used low CN with low rainfall (similar to Run 3 in the Golder's model), resulting in a smaller percent change. The Golder's study indicated that the Rosemont modeling study could underestimate the percent change because they used low rainfall with low CN. Apparently the Golder's study does not support the Rosemont modeling results. Please explain why the Rosemont model with low CN with low rainfall can be reasonable.
Accuracy	5	11-17	The FEIS stated that the relative difference in percent change of peak flow was 13% for the Golder model, compared with 17% for the Rosemont model. The FEIS concluded 4% difference is insignificant. However, according to Table 76 (p.7), the peak difference is 22%, not 17%. It appears that the 17% difference is for average annual runoff (Table 76). The difference between 13% and 22% are not insignificant. Therefore the conclusion that the Rosemont model is reasonable and appropriate should be reconsidered.
Accuracy	5	33-39	The Golder's study discussed about the difference in the peak discharge to justify the use of the Rosemont model. In addition to the difference in peak, the difference in runoff volume between the models should be discussed. The change in runoff volume could substantially affect the "Potential Waters of the United States" and Davidson Canyon.

**From:** Evan Canfield  
**Sent:** Friday, November 20, 2015 5:12 PM  
**To:** Leidy, Robert  
**Cc:** Julia Fonseca  
**Subject:** Comments on Erosion Modeling

Hello Robert,

There are numerous concerns raised in this comment letter. The concerns about sediment transport are on page 80 of the comment table.

Evan

---

Evan Canfield PhD PE CFM  
Planning & Development Division  
Pima County Regional Flood Control District  
97 E Congress St.  
Tucson, AZ 85701

Phone: (520) 724-4636